



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,814	02/09/2001	Patrick Barrow	13DV13726	8662

29399 7590 11/10/2004

JOHN S. BEULICK
C/O ARMSTRONG TEASDALE LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST. LOUIS, MO 63102-2740

EXAMINER

DAY, HERNG DER

ART UNIT	PAPER NUMBER
----------	--------------

2128

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,814

Applicant(s)

BARROW ET AL.

Examiner

Herng-der Day

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/3/02, 8/8/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-18 have been examined and claims 1-18 have been rejected.

Priority

2. Applicants' claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. The provisional application number is 60/241,560, filed October 19, 2000.

Oath/Declaration

3. The Declaration filed February 9, 2001, appears to be defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §602.01 and §602.02.

The oath or declaration appears to be defective because a United States provisional application should claim the benefit under Title 35, United States Code, §119(e).

Drawings

4. The drawings are objected to for the following reasons. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4-1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Art Unit: 2128

(a) “a two-dimensional electronically modeled aircraft harness drawing (not shown in Figures 4 and 5) is generated 132”, as described in lines 26-27 of page 5.

4-2. Portions 184 of Figure 7 define “angle between” “J-L & G-H”. However, there is no wire or fitting between points J and L. It is unclear which angle is between “J-L & G-H”.

Specification

5. The disclosure is objected to because of the following informalities:

Appropriate correction is required.

5-1. As described in line 10 of page 6, “a second orientation 154 along a Z-X plane”.

However, 154 is also referred to as “X-Y plane 154” in lines 18-20 of page 7.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 12-18 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. In accordance with MPEP section 2164.08(a), claim 12 is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph, as reciting only a single means (element). MPEP § 2164.08(a) recites the following:

2164.08(a) Single Means Claim

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the

Art Unit: 2128

specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

In this application, claim 12 recites "A system for ... comprising a processor programmed to determine harness design parameters from the three-dimensional aircraft engine harness definition". This single element is nonenabling for the scope of the claim since it is not in combination with any additional means (elements) and, hence, can be interpreted as encompassing every conceivable means for achieving the claimed limitation. Claims 13-18 are rejected as being dependent on the rejected claim 12.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9-1. Claim 1 recites, "a method for generating a two-dimensional electronically modeled aircraft engine harnesses" in the preamble of the claim. The aircraft engine harnesses have been "electronically modeled" is vague and indefinite because how to "electronically model" aircraft engine harnesses has not been clearly defined.

9-2. Claim 6 recites, "a modeling system for producing an electronic model of an aircraft engine harness" in the preamble of the claim. The "electronic model" is vague and indefinite because it has not been clearly defined.

Art Unit: 2128

9-3. Claim 12 recites, “a system for generating a two-dimensional electronic model of an aircraft engine harness” in the preamble of the claim. The “electronic model” is vague and indefinite because it has not been clearly defined.

9-4. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

10. Claim 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for failing to recite elements that logically amount to the system set forth in preamble of claim 12.

10-1. Claim 12 sets forth a system for “generating a two-dimensional electronic model of an aircraft engine harness from a three-dimensional aircraft engine harness definition that includes a plurality of connector fittings coupled together with a plurality of branches”. However, the body of the claim merely recites the element of “a processor programmed to determine harness design parameters from the three-dimensional aircraft engine harness definition” without actually providing other elements that logically amount to the system for “generating a two-dimensional electronic model of an aircraft engine harness from a three-dimensional aircraft engine harness definition that includes a plurality of connector fittings coupled together with a plurality of branches”. Claims 13-18 are rejected as being dependent on the rejected claim 12.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-5 are rejected under 35 U.S.C. 101 because the inventions as disclosed in claims are directed to non-statutory subject matter.

Art Unit: 2128

12-1. Regarding claim 1, this claim is directed to “a method for generating a two-dimensional electronically modeled aircraft engine harnesses”. However, all the recited steps are not in the technology arts. Claims 2-5 are rejected as being dependent on the rejected claim 1.

12-2. The Examiner acknowledges that even though the claims are presently considered non-statutory they are additionally rejected below over the prior art. The Examiner assumes the Applicants will amend the claims to overcome the 101 rejections and thus make the claims statutory.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Aldrich et al., U.S. Patent 5,138,698 issued August 11, 1992.

14-1. Regarding claim 1, Aldrich et al. disclose a method for generating a two-dimensional electronically modeled aircraft engine harnesses from a three-dimensional harness definition that includes a plurality of connector fittings coupled together with a plurality of branches, said method comprising the steps of:

defining each harness connector fitting (connector, column 16, lines 11-46);

determining design parameters (editing of the default values file, column 11, lines 6-15);

and

generating a two-dimensional stick form model (transferred to a two dimensional representation, column 3, lines 17-23).

14-2. Regarding claim 2, Aldrich et al. further disclose comprising the step of displaying the design parameters in a tabular output (for example, FIG. 20 is a wiring table).

14-3. Regarding claim 3, Aldrich et al. further disclose said step of determining design parameters further comprises the step of determining at least one of a branch angle, a base angle, and a true angle for the harness (for example, FIG. 19B displays determined angles of wires and connectors).

14-4. Regarding claim 4, Aldrich et al. further disclose said step of determining design parameters further comprises the step of determining at least one of a wire length, a fitting keyway, and a master keyway for the harness (Dimensioning techniques, column 40, lines 31-36; for example, FIG. 19B displays determined wire length between breakouts or between breakout and connector).

14-5. Regarding claim 5, Aldrich et al. further disclose said step of determining design parameters further comprises the steps of:

determining a length between harness branches (for example, FIG. 19B displays determined wire length between breakouts or between breakout and connector); and

determining locations of diametrical changes of the harness (determined breakout, FIG. 19B, diametrical change occurs when there is a breakout or branch).

14-6. Regarding claim 6, Aldrich et al. disclose modeling system for producing an electronic model of an aircraft engine harness, said system configured to generate a two-dimensional electronic drawing from a three-dimensional harness definition (transferred to a two dimensional

Art Unit: 2128

representation, column 3, lines 17-23) that includes a plurality of connector fittings coupled together with a plurality of branches (connector, column 16, lines 11-46).

14-7. Regarding claim 7, Aldrich et al. further disclose to generate the two-dimensional electronic model, said system further configured to determine at least one of a branch angle, a wire length, and a base angle of the harness (for example, FIG. 19B displays determined wire length between breakouts or between breakout and connector).

14-8. Regarding claim 8, Aldrich et al. further disclose to generate the two-dimensional electronic model, said system further configured to determine at least one of a harness true angle, a fitting keyway, and a master keyway of the harness (for example, FIG. 19B displays determined angles of wires and connectors).

14-9. Regarding claim 9, Aldrich et al. further disclose said system further configured to determine a length between adjacent harness branches (for example, FIG. 19B displays determined wire length between breakouts).

14-10. Regarding claim 10, Aldrich et al. further disclose said system further configured to determine diametrical changes of the harness branches (determined breakout, FIG. 19B, diametrical change occurs when there is a breakout or branch).

14-11. Regarding claim 11, Aldrich et al. further disclose said system further configured to define each connector fitting of the harness (connector, column 16, lines 11-46).

14-12. Regarding claim 12, Aldrich et al. disclose a system for generating a two-dimensional electronic model of an aircraft engine harness from a three-dimensional aircraft engine harness definition that includes a plurality of connector fittings coupled together with a plurality of branches, said system comprising a processor (using a computer, column 4, lines 49-53)

Art Unit: 2128

programmed to determine harness design parameters from the three-dimensional aircraft engine harness definition (editing of the default values file, column 11, lines 6-15).

14-13. Regarding claim 13, Aldrich et al. further disclose said processor further programmed to determine parameters including at least one of a branch angle, a base angle, and a true angle (for example, FIG. 19B displays determined angles of wires and connectors).

14-14. Regarding claim 14, Aldrich et al. further disclose said processor further programmed to determine parameters including at least one of a wire length, a fitting keyway, and a master keyway (Dimensioning techniques, column 40, lines 31-36; for example, FIG. 19B displays determined wire length between breakouts or between breakout and connector).

14-15. Regarding claim 15, Aldrich et al. further disclose said processor further programmed to display the harness design parameters in a tabular format (for example, FIG. 20 is a wiring table).

14-16. Regarding claim 16, Aldrich et al. further disclose said processor further programmed to define each harness connector fitting (connector, column 16, lines 11-46).

14-17. Regarding claim 17, Aldrich et al. further disclose said processor further programmed to determine a length between harness branches (for example, FIG. 19B displays determined wire length between breakouts).

14-18. Regarding claim 18, Aldrich et al. further disclose said processor further programmed to determine diametrical changes of the harness branches (determined breakout, FIG. 19B, diametrical change occurs when there is a breakout or branch).

Art Unit: 2128

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Reference to Uchiyama et al., U.S. Patent 6,330,746 B1 issued December 18, 2001, and filed June 21, 1999, is cited as disclosing a method of determining the length of electric wires for use in constructing a wire harness.

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (703) 305-5269. The Examiner can normally be reached on 9:00 - 17:30.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jean Homere can be reached on (703) 308-6647. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Herng-der Day *H.D.*
October 15, 2004

J. Homere
JEAN R. HOMERE
PRIMARY EXAMINER